



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/988,225      | 11/19/2001  | Osman Ozturk         | 3891-5              | 8105             |

7590 06/06/2005

NIXON & VANDERHYE P.C.  
8th Floor  
1100 North Glebe Road  
Arlington, VA 22201

EXAMINER

DAO, MINH D

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2682

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                              |  |
|------------------------------|-------------------------------|------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>09/988,225 | Applicant(s)<br>OZTURK ET AL |  |
|                              | Examiner<br>MINH D. DAO       | Art Unit<br>2682             |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12/28/2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 12-17 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-8, 18-21 and 23-25 is/are rejected.
- 7) ☐ Claim(s) 9-11 and 26-32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1,2,6-8, 18-21, 23-25 are rejected under 35 U.S.C. 102(e) as being anticipated by LeBlanc (US 5,570,412).

Regarding claim 1, LeBlanc teaches a method for determining a location of a mobile radio (see fig. 8, items 156-164), comprising: determining location information for plural cells in a set of cells associated with the mobile radio (see fig. 1, base stations 14s; col. 7, lines 41-47), and using the cell location information to determine a location of the mobile wherein the cell location information defining one or more boundaries of a coverage area corresponding to each of the cells (see fig. 1, base stations 14s; fig.8, items 156-164, col. 17, lines 26-47).

Regarding claim 2, LeBlanc teaches the method in claim 1, wherein the set of cells includes an active set of cells for the mobile radio (see fig. 1, base stations 14s; col. 7,

lines 41-47). In this case, the neighboring base stations 14s of the cellular phone read on the active set of cells of the present invention.

Regarding claim 6, LeBlanc teaches the method of claim 1, wherein the cell location information includes coordinates of boundary positions for each cell (see fig. 8, item 156; col. 17, lines 26-47).

Regarding claim 7, LeBlanc teaches the method in claim 6, further comprising: selecting certain ones of the coordinates to define the mobile location (see fig. 8, items 160-164; col. 17, lines 40-47).

Regarding claim 8, LeBlanc teaches determining an RF measurements for each of the base stations as a scaled contour shape having boundaries capable of being projected on a digital orthophotograph (see fig. 8, item 156), and therefore LeBlanc must inherently include a horizontal and a vertical coordinate of the scaled contour representing the coverage of each base station.

Regarding claim 18, the claim has the limitations as that of claim 1, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 1. In addition, LeBlanc also discloses a node in or coupled to a radio access network for determining a location of a mobile radio comprising electronic circuitry configured to

Art Unit: 2682

perform the tasks mentioned in claim 1 (see col. 11, lines 15-30; col. 12, lines 1-16; also see fig. 6).

Regarding claim 19, the claim has the limitations as that of claim 2, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 2.

Regarding claim 20, the claim has the limitations as that of claim 4, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 4.

Regarding claim 21, the claim has the limitations as that of claim 3, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 3.

Regarding claim 23, the claim has the limitations as that of claim 6, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 6.

Regarding claim 24, the claim has the limitations as that of claim 7, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 7.

Regarding claim 25, the claim has the limitations as that of claim 8, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 8.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 3,4, are rejected under 35 U.S.C. 103(a) as being unpatentable over LeBlanc (US 5,570,412) in view of Soliman (US 2002/0034947).

Regarding claims 3, and 4, LeBlanc, as mentioned above, teaches the limitations of claim 1 but does not mention that the set of cells includes cells that are currently supporting a handover communication with the mobile radio. Soliman, in an analogous

Art Unit: 2682

art, teaches a handoff process of CDMA communication system by monitoring the position of mobile unit via position information received from corresponding base stations (see sections [0013], [0051], [0059]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the teaching of Soliman to LeBlanc in order to create a position database that has map information depicting coverage areas of the first and the second cells and also the predetermined handoff area as taught by Soliman (see abstract of Soliman).

***Allowable Subject Matter***

3. Claims 9-11, 26-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 9, cited references LeBlanc teaches the limitations of claim 8. However, LeBlanc fails to teach comparing the horizontal coordinates; selecting one or more of the horizontal coordinates; comparing the vertical coordinates; selecting one or more of the vertical coordinates; and using the selecting horizontal and vertical coordinates to define the mobile radio location as specified in the claim.

Regarding claim 26, cited reference LeBlanc teaches the limitations of claim 25. However, LeBlanc fails to teach compare the horizontal coordinates; select one or more

of the horizontal coordinates; compare the vertical coordinates; select one or more of the vertical coordinates; and use the selected horizontal and vertical coordinates to define the mobile radio location as specified in the claim.

Regarding claim 29 cited reference LeBlanc teaches the limitations of claim 18. However, LeBlanc fails to teach obtain coordinates of cells in the set; analyze a first group of lowest horizontal coordinates for the set of cells and select a highest coordinate from the first group; analyze a second group of highest horizontal coordinates for the set of cells and select a lowest coordinate from the second group; analyze a third group of lowest vertical coordinates for the set of cells and select a highest coordinate from the third group; analyze a fourth group of highest vertical coordinates for the set of cells and select a lowest coordinate from the fourth group; determine a location of the mobile radio using the selected coordinates from some of the first, second, third, and fourth groups as specified in the claim.

4. Claims 12-17 are allowed.

5. The following is an examiner's statement of reasons for allowance:

Regarding claim 12, the closest prior art of record are: cited references LeBlanc, Cedervall and Dunn. Cedervall and Dunn teach a method for determining a location of a



Art Unit: 2682

mobile radio comprising: obtaining previously determined coordinates of plural cells in a set of cells associated with the mobile radio, where each coordinate may be defined with a horizontal coordinate and a vertical coordinate. LeBlanc teaches a method of determining location of a mobile unit by using the boundaries of the associated cell sites. However, LeBlanc, Cedervall and Dunn, alone or in combination fail to teach analyzing a first group of lowest horizontal coordinates for the set of cells and selecting a highest coordinate from the first group; analyzing a second group of highest horizontal coordinates for the set of cells and selecting a lowest coordinate from the second group; analyzing a third group of lowest vertical coordinates for the set of cells and selecting a highest coordinate from the third group; analyzing a fourth group of highest vertical coordinates for the set of cells and selecting a lowest coordinate from the fourth group; determining a location of the mobile radio using the selected coordinates from some or all of the first, second, third, and fourth groups as specified in the claim.

### ***Conclusion***

6. Applicant's arguments filed on 12/28/2004 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH D. DAO whose telephone number is 571-272-7851. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NICK CORSARO can be reached on 571-272-7876. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Minh Dao *war*  
Art Unit 2682  
May 25, 2005

  
**LEE NGUYEN**  
**PRIMARY EXAMINER**